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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,143

03/31/2004

Angel Stoyanov

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09/07/2006

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,143

Applicant(s)

STOYANOV ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 7/28/06
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3, 4 and 10-13 is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pp 4-7, filed 7/28/2006, with respect to the rejections of claims 1 and 3-13 under 35 U.S.C. 102 and 103 have been fully considered and are persuasive in view of the amendments to the claims. Accordingly, the rejections have been withdrawn. Applicant's arguments with respect to the Provisional Obviousness-Type Double Patenting Rejection have been fully considered and are persuasive in view of the amendments to the claims. Accordingly, the Provisional Obviousness-Type Double Patenting Rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in detailed below.

Applicant argues on p 6 that the Herron and Cook references fail to teach a method in which polyacrylic acid crosslinked fibers are sprayed with a bleaching agent. Cook et al discloses that the polycarboxylic acid crosslinked fibers can be treated by spraying sodium hydroxide and hydrogen peroxide onto an air stream containing the fibers (col 14, lines 18-20).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al (5562740) in view of Herron et al (5549791).

Cook et al discloses individualized polycarboxylic acid crosslinked fibers with a brightness of 86 after bleaching with an aqueous solution of sodium hydroxide and hydrogen peroxide (col 3, lines 42-45; col 13, lines 65-67). Cook further discloses an amount of sodium hydroxide to be applied of about 0.07 weight % to about 1.8 weight % of the dry fibers (1.4 to 36 lb/ton) and an amount of hydrogen peroxide to be applied of about 0.02 weight % to about 1.5 weight % of the dry fibers (0.4 to 30 lb/ton) (col 4, lines 42-45 and 49-51). The disclosed ranges of Cook et al for sodium hydroxide and hydrogen peroxide concentrations substantially overlap the claimed ranges. Cook et al discloses that the polycarboxylic acid crosslinked fibers can be treated by spraying sodium hydroxide and hydrogen peroxide onto an air stream containing the fibers (col 14, lines 18-20).

Cook et al does not disclose crosslinking with a polyacrylic acid.

Herron et al teaches various various crosslinking agents known in the art for use with cellulosic fibers, including C2-C9 polycarboxylic acids and polymeric polyacrylic acid (col 3, lines 15-53). Herron et al also discloses that polymeric polyacrylic acid is a preferred crosslinking agent because it is stable at higher temperatures. In addition, absorbent structures made from fibers crosslinked by polymeric polyacrylic acid have increased wet and dry resilience (col 3, lines 50-62). Herron et al further discloses that post crosslinking bleaching steps are known (col 13, lines 14-16).

The art of Cook et al, Herron et al and the instant invention is analogous as pertaining to bleached crosslinked fibers. It would have been obvious to one of ordinary skill in the art to use a polymeric polyacrylic acid crosslinking agent in the fibers of Cook

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et al in view of Herron et al to provide increased wet and dry resilience in absorbent structures made therefrom.

Allowable Subject Matter

Claims 1, 3-4 and 10-13 are allowed.

The following is a statement of reasons for allowance. Typical fiber bleaching processes involve contacting the fibers with a bleaching agent for a period of time from minutes to hours at a specified temperature and pH, then washing the fibers (Cook et al, col 14, lines 27-30). If whiter fibers are needed, additional bleaching/washing steps are conducted. The prior art does not disclose or suggest fibers treated with a bleaching agent wherein the Whiteness Index increases over a period of 14 days.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DRC



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